CITY OF ROCKVILLE
DEPARTMENT OF PUBLIC WORKS
SEDIMENT CONTROL AND STORMWATER MANAGEMENT REGULATIONS
Adopted September 9, 2002

ARTICLE I
General

A. Authority

Pursuant to the provisions of Section 19-11, Chapter 19 (Stormwater Management and Sediment Control) of the Rockville City Code, the Environment Article, Title 4, Subtitle 2 (Stormwater Management), Annotated Code of Maryland, 1987 replacement volume, and Code of Maryland Regulations COMAR 26.17.01 (Erosion and Sediment Control) and COMAR 26.17.02 (Stormwater Management), the Department adopts these regulations subject to the approval of the Mayor and Council.

B. Definitions

The various terms used in these Regulations are defined in Chapter 19 (Sediment Control and Stormwater Management) and Chapter 25 (Zoning and Planning Ordinance) of the Rockville City Code and in Code of Maryland Regulations, COMAR 26.17.01 (Erosion and Sediment Control) and COMAR 26.17.02, Stormwater Management. Any term not so defined shall be given its ordinary meaning within the context in which it is used.

C. Documents Incorporated by Reference.

These regulations incorporate by reference the following documents, as they may be subsequently amended: (Copies are available for reference at the Department).

(a) The 2000 Maryland Stormwater Design Manual, Volumes I & II (Maryland Department of the Environment, April 2000), which shall serve as the official guide for stormwater principles, methods, and practices.

(b) United States Department of Agriculture, Natural Resources Conservation Service Maryland Conservation Practice Standard Pond Code 378 (January 2000).

(c) 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control (Maryland Department of the Environment, Water Management Administration).

(d) Standards and Details for Construction (City of Rockville, January, 1998).

(e) Guidelines established by the Department that provide for interpretation and implementation of Chapter 19 of the Rockville City Code and these Regulations.

(f) Watershed Management Plans adopted by the City for Cabin John Creek, Rock Creek, and Watts Branch.

ARTICLE II

Stormwater Management.

DIVISION 1. POLICY AND PROCESS

A. Activity Subject to Provision of Stormwater Management.

(1) Stormwater management shall be provided for all new development or redevelopment that:

(a) Involves 5,000 square feet or more of disturbed area; or

(b) Creates or replaces two thousand (2,000) square feet or more of impervious area on an improved single-family residential lot; or

(c) Creates or replaces any amount of impervious area on property other than an improved single-family residential lot; or

(d) Requires a federal or state authorization for alternation of any floodplain, waterway, wetland or wetland buffer.

(2) Construction of new impervious area over existing impervious area shall be included in the impervious area calculations. Examples include bridges, elevated walkways, the construction of additional stories to an existing building, and conversion of paving to building.

(3) Resurfacing or milling of existing paving is not included in land disturbing activity or impervious area calculations, unless such resurfacing exposes the ground or subgrade.

B. Stormwater Management Required.

(1) Stormwater management shall be required as follows:

(a) If the proposed land disturbing activity involves less than fifty percent (50%) of the total site area, then stormwater management shall be required only for activity within the disturbed area and for the rights-of-way contiguous to the site.

(b) If the land disturbing activity involves fifty percent (50%) or more of the total site area, then stormwater management shall be required for the entire site and contiguous rights-of-way, including all impervious areas previously existing on the site that do not have currently acceptable stormwater management provided for them.

(c) Stormwater management shall be required in accordance with this section even if redevelopment activity results in less impervious area than previously existed.

(d) Redevelopment sites shall reduce imperviousness below existing conditions wherever feasible.

(2) Stormwater management shall also be provided for public or private street rights-of-way contiguous to the site as follows:

(a) New development and redevelopment shall also provide for stormwater management of the impervious area contained in either one-half of the width or thirty feet of width, whichever is less, of the rights-of-way of existing and planned non-State roads, and of State owned rights-of-way. If stormwater management for a right-of-way has previously been provided through currently acceptable stormwater management facilities or stormwater management alternatives, then this area may be excluded from the computations.

(b) The length of the right-of-way to be included shall be measured along all property lines abutting the rights-of-way. In the case of one single-family-detached residential lot development on a corner lot, only the road which has the primary physical access shall be included in this computation. Development of properties on cul-de-sacs shall provide stormwater management for a wedge-shaped section of right-of-way.

(c) In cases of redevelopment involving less than fifty percent (50%) of the total site area, the length of the right-of-way included in the stormwater management computation shall be proportional to the disturbed area. Redevelopment involving fifty percent (50%) or more of the total site area shall provide stormwater management for the entire frontage of all contiguous rights-of-way.

C. Satisfaction of Stormwater Management Requirements.

(1) Stormwater management shall be addressed by providing controls for water quality (water quality volume and recharge volume), and water quantity (channel protection volume and overbank flood protection volume) on-site. The Department may approve a stormwater management alternative in accordance with Article II. Division 2.B of these Regulations.

(2) The Department may approve one or more of the following a stormwater management alternative to on-site stormwater quality and quantity controls:

(a) Easement or Conveyance of Land. Granting of an easement or conveyance of land for construction of a regional stormwater management facility and/or other watershed improvement.

(b) Stormwater Management Facility. Provision of design and permits and/or construction of a regional stormwater management facility or a retrofit of an existing stormwater management facility.

(c) Watershed Improvement Project. Provision of design and permits and/or construction of stream restoration or other watershed improvements.

(d) Monetary Contribution. Provision of a monetary contribution in accordance with these Regulations, which shall be deposited to the City's Stormwater Management Fund.

(e) Such other measures that the Department deems appropriate to meet the intent of Chapter 19 of the Rockville City Code and these Regulations.

(3) Provision must be made for an adequate stormwater conveyance system from the site to any offsite stormwater management facility or to the receiving stream. The receiving stream must be able to safely convey the additional runoff without undue risk of overbank flooding or increased stream erosion.

(4) Nothing in these Regulations shall preclude the satisfaction of stormwater management requirements by a combination of measures, if so approved by the Department.

D. Stormwater Management Approvals.

(1) The developer is responsible for obtaining all stormwater management approvals and permits in accordance with Chapter 19 and these Regulations.

(2) Stormwater Management Concept approval is required prior to approval of any Use Permit, Preliminary Development Plan, Planned Residential Unit Plan, Residential Townhouse Plan, Comprehensive Planned Development, or Detailed Application, and before submission of a Stormwater Management Permit application.

(3) In cases where previous review by the City's Planning Division of the Community Planning and Development Services Department is not required, the City's Inspection Services Division, prior to issuing any Building Permit, will refer to the Department of Public Works such activity that may necessitate a Stormwater Management Concept and/or Permit.

(4) A Stormwater Management Permit and the related Sediment Control Permit for a stormwater facility or watershed improvement must be issued prior to the construction of any part of the stormwater management facility or watershed improvement, and prior to the issuance of any related permit that creates impervious area to be controlled by the stormwater management facility.

(5) Stormwater Management Concepts and Permits must meet all State and City stormwater management standards in effect at time of issuance, subject to any grandfathering or transition provisions specified by the State or City.

E. Stormwater Management Approval for Multi-phase Development Projects.

In addition to the requirements of Article II. Division 1. D. above, developments that propose to build in phases or stages, including multi-phase Use Permits, Comprehensive Planned Developments and Planned Residential Unit Developments, are subject to the following requirements.

(a) A comprehensive Stormwater Management Concept that provides for all phases of the development must be approved at the earliest stage of the development review approval (i.e., Use Permit, Concept Plan, etc.).

(b) A comprehensive Stormwater Management Concept for a multi-phase development may be implemented over the life of the project through issuance of Stormwater Management Permits, provided that said Permits meet stormwater management standards in effect at time of permit issuance as provided in Article II. Division I. D.5 of these Regulations.

(c) A Stormwater Management Permit must be approved and the stormwater management facilities constructed for each phase prior to or in conjunction with construction of that phase. Stormwater management facilities may be constructed prior to construction of imperviousness in later phases, but may be subject to later modifications to address updates to stormwater management requirements.

DIVISION 2. STORMWATER MANAGEMENT SUBMITTAL REQUIREMENTS AND REVIEW STANDARDS

A. Stormwater Management Concept.

(1) A Stormwater Management Concept provides the framework for submittal of a Stormwater Management Permit, but is subject to modification during the subsequent permit review stage. The terms of an approved Stormwater Management Concept may be amended at the Department's sole discretion to address changes to stormwater management standards or requirements as determined by the State or the City.

(2) Submittals for Stormwater Management Concept approval shall include, at a minimum, the following information:

(a) Completed Stormwater Management Concept application and application fee;

(c) Stormwater Management Concept plan showing existing conditions, proposed construction, existing and proposed stormwater management facilities, and areas designated to use non-structural stormwater management practices;

(d) Drainage area plan, indicating boundaries and acreage of each sub-drainage area;

(e) Description of how stormwater runoff from the development will be controlled to meet the City's stormwater management requirements, including proposed structural and non-structural stormwater management practices;

(f) If requesting use of stormwater management alternatives, plans and descriptions of the proposed alternatives;

(f) Location of existing streams, impoundments, and wetlands on the site;

(g) Geotechnical investigations, if required by the Department;

(g) Designated access path to the proposed facilities from public rights-of-way for the purpose of maintenance;

(h) Conceptual hydrology and stormwater management facility sizing computations. Basic design hydrology must be consistent with the Design Manual;

(i) If proposing a stormwater management monetary contribution, a plan indicating sub-drainage areas affected and a table listing the impervious acreage for each area and what type of contribution is proposed (i.e., contribution for components of water quality, quantity, or both);

(j) If proposing use of a stormwater management alternative, written justification for the alternative that addresses the requirements of Article II. Division 2.B.1 of these Regulations

(k) Approved Natural Resources Inventory/Forest Stand Delineation (NRI/FSD), as required by Chapter 10.5 of the Rockville City Code.

B. Stormwater Management Concept; Review Considerations for Stormwater Management Alternatives

(1) Stormwater management alternatives in lieu of on-site water stormwater management quality control for the Water Quality Volume and Recharge Volume and/or quantity control for the Channel Protection Volume and the Overbank Flood Protection Volume may be approved on a case-by-case basis if the Department determines that:

(a) A regional facility exists that provides adequate stormwater management quality and/or quantity control for the site and conveyance to the facility location will not lead to additional degradation of water quality or quantity conditions;

(b) On-site stormwater management for redevelopment and infill projects would be less beneficial to the City's watershed management goals than a stormwater alternative; or

(c) Circumstances exist that prevent the reasonable implementation of on-site quality and/or quantity control practices.

(2) Approval of a stormwater management alternative in lieu of on-site stormwater management quality and/or quantity control for all or part of a site shall be given only on a case-by-case basis.

(3) The Department shall consider the cumulative effects of all stormwater management alternatives approved within a watershed.

C. Stormwater Management Monetary Contribution Formula and Requirements.

(1) When a stormwater management monetary contribution for a site is approved as an acceptable stormwater management alternative, it shall be based on the following formulas. An estimate of the required contribution shall be determined by the applicant during the Stormwater Management Concept review. The final contribution amounts shall be calculated during the Stormwater Management Permit review using the detailed engineering plans for impervious area calculation and the contribution rates in effect at the time of the permit review.

(a) Where a monetary contribution in lieu of on-site stormwater management water quality control (i.e., Water Quality Volume, including Recharge) is accepted, the following formula will apply:

$$C = A_i \quad X \quad (\$12{,}000^*)$$

(b) Where a monetary contribution in lieu of on-site stormwater management quantity control for both Channel Protection Volume and Overbank Flood Protection Volume is accepted, the following formula will apply:

$$C = A_i \quad X \quad (\$40{,}000^*)$$

(c) Where a monetary contribution in lieu of on-site stormwater management quantity control for only the Channel Protection Volume OR only the Overbank Flood Protection Volume is accepted, the following formula will apply:

$$C = A_i \quad X \quad (\$20{,}000^*)$$

(d) Where a monetary contribution in lieu of on-site stormwater management for both water quantity and water quality control is granted, the following formula will apply:

$$C = A_i \quad X \quad (\$52{,}000^*)$$

(e) With respect to sites involving more than one drainage area, the appropriate formula will be applied to each drainage area. The following definitions apply to each formula:

C – Contribution in dollars.

A_i – Number of acres of proposed impervious surfaces rounded to the nearest hundredth of an acre (including new and existing impervious areas) including one-half of the adjacent rights-of-way up to 30 feet maximum of existing and planned contiguous non-State streets and State owned rights-of-way where acceptable stormwater management has not been, or will not be, provided.

* These stormwater management monetary contribution rates are set by resolution of the Mayor and Council, and are subject to revision by the Mayor and Council.

(2) A monetary contribution in lieu of quality control is for the Water Quality Volume, which includes the Recharge Volume. The Recharge Volume shall not be separated for purposes of determining the monetary contribution.

(3) In rare circumstances, such as for environmental protection or technical constraints, the City may require a developer to make a monetary contribution in lieu of constructing otherwise acceptable on-site stormwater management. In such instances, the City may not require a contribution that exceeds the cost of providing acceptable on-site stormwater management. Where the applicant can provide evidence acceptable to the Department that on-site stormwater management (including the cost of the land and a maintenance escrow fund equaling the cost of construction) may be provided at a lower cost than the required contribution, the Department shall adjust the contribution to be no greater than the applicant's estimated on-site costs. None of the foregoing, however, prevents the City from accepting a voluntary contribution that exceeds the cost of an on-site facility.

(4) A monetary contribution will be required in cases where a developer utilizes an off-site stormwater management facility constructed for another development project, whether the facility is public or private.

(5) Nothing requires the City to accept a monetary contribution in lieu of an on-site facility if it would not be in the best interests of the City.

D. Stormwater Management Concept; Effect of Previous Stormwater Management Monetary Contributions.

(1) All development projects must obtain approval of a Stormwater Management Concept, regardless of whether a previous stormwater management monetary contribution was accepted for all or part of the site. Any proposal to credit a previous monetary contribution against current stormwater management

requirements must be set forth in the Stormwater Management Concept submittal and be reviewed by the Department.

(2) With respect to impervious areas covered by previous monetary contributions, the City, in its sole discretion, may:

(a) Consider the stormwater management requirement as being satisfied without further monetary obligation, provided that the monetary contribution rates have not increased; or

(b) Require an additional contribution equal to the difference between the amount previously required and the amount calculated by the current monetary contribution rate; or

(c) Require the developer to participate in a regional stormwater management project or watershed improvement project; or

(d) Require on-site stormwater management for the area previously covered by a monetary contribution, if the City determines that on-site control is appropriate and practical.

(3) If on-site stormwater management or developer participation in a regional stormwater management or watershed project is required, no credit will be given for previous stormwater management monetary contribution payments.

(4) Nothing in Chapter 19 or these Regulations shall require the Department to accept a monetary contribution merely because one or more monetary contributions were previously accepted for the area.

E. Stormwater Management Permit.

(1) The application for a Stormwater Management Permit shall include, at a minimum, the following information for review and approval by the Department. Said information shall be submitted on a schedule determined by the Department:

(a) Completed Stormwater Management Permit application form supplied by the Department;

(b) Stormwater Management Permit plans as described below in Article II. Division 2.E.(2);

(c) Copy of the Stormwater Management Concept approval letter;

(d) A brief narrative description of the project;

(e) Geotechnical investigations including soil maps, borings, site specific recommendations, and any additional information necessary for the proposed stormwater management design;

(f) Descriptions of all water courses, impoundments, and wetlands on or adjacent to the site or into which stormwater directly flows;

(g) Descriptions of any non-structural stormwater management practices used for the site and calculations of any related stormwater management credits;

(h) Hydrologic computations, including drainage area maps depicting pre-development and post-development runoff flow path segmentation and land use;

(i) Hydraulic computations;

(j) Structural computations;

(k) Dam breach and floodplain computations, if applicable;

(l) Unified sizing criteria volume computations according to the Design Manual;

(m) Sediment Control Permit approved by the City for construction of the stormwater management facilities and/or watershed improvements;

(n) Any required State or Federal permits for work in wetlands, waterways or floodplains;

(o) Any required City, County, State, Federal or WSSC permits for work affecting public improvements regulated by these entities;

(p) Cost estimate for materials and construction cost; (on 8 ½ by 11" paper);

(p) Stormwater management monetary contribution estimate for each category, if such contribution was approved in the Stormwater Management Concept;

(r) Performance bond or other surety;

(s) Draft stormwater management easement description, easement/maintenance agreement, and record plat (if applicable); and

(t) Any other information required by the City.

(2) Plans submitted to support a Stormwater Management Permit application shall include, at a minimum, the following:

(a) A vicinity map;

(b) Topographic survey showing existing and proposed contours, including the area necessary to analyze downstream impacts from the proposed stormwater management facility;

(c) Benchmark information necessary for construction;

(d) Any existing and proposed improvements including location and layout of buildings or other structures, impervious surfaces, utilities, storm drainage, stormwater management facilities, other watershed improvements, and all grading;

(e) Locations of existing and proposed easement and right-of-way locations;

(f) Location and proposed grades for maintenance access to the stormwater management facility;

(g) The delineation, if applicable, of nearby streams, one hundred year floodplain, adjacent wetlands, and associated buffers according to the City's Environmental Guidelines;

(h) Areas and acreage meeting non-structural stormwater management practice criteria;

(i) Structural and construction details and specifications for all components of the proposed drainage system or systems, stormwater management facilities, and/or watershed improvements;

(j) Data for total site area, disturbed area, new impervious area, and total impervious area;

(k) A table showing the unified sizing criteria volumes required in the Design Manual;

(l) A list of plant species, sizes and quantities and their locations to be used for stormwater management facility or watershed improvement planting;

(m) All soil boring logs and locations;

(n) A maintenance schedule for the life of the stormwater management facility stating the maintenance to be completed, the time period for completion, and who shall perform the maintenance;

(o) Construction check-off lists for each stormwater management facility;

(p) Certification by the owner/developer that all construction will be done according to the approved plan;

(q) Landscape plan, signed by a landscape architect licensed in the state of Maryland, as required by the City, that addresses aesthetic, habitat, and maintenance needs, and is in conformance with City standards;

(r) An as-built certification signature block to be executed after project completion; and

(s) A Forest Conservation Plan (FCP) approved by the City Forester, as required by Chapter 10.5 of the Rockville City Code.

(3) A simplified Stormwater Management Permit review process will apply to development projects where the approved Stormwater Management Concept is based solely on a monetary contribution. The Stormwater Management Permit application will consist of a completed application form, detailed site plans showing final impervious area for the purpose of confirming the monetary contribution amount, and any other information related to conditions of the Stormwater Management Concept approval or required by the Department.

(4) At the discretion of the Department, a Stormwater Management Permit application may be submitted that reflects amendments to the approved Stormwater Management Concept without formal revision of the Concept.

DIVISION 3. STORMWATER MANAGEMENT DESIGN CRITERIA.

A. General requirements.

(1) Stormwater management facilities and non-structural practices must be designed and constructed in accordance with the Design Manual and Department standards, guidelines and specifications. With approval of the Department, non-structural stormwater management practices may be used in lieu of, or to reduce the size of, structural facilities, and related stormwater credits may be given as defined in the Design Manual.

(2) Each development project must provide stormwater management for the site in accordance with standards and criteria current at the time of the project. Credit will be given for previously provided stormwater management measures only to the extent that those measures meet the then current standards.

(3) The pre-development peak discharge rate shall be computed assuming that all land cover in the tributary area are meadow in good hydrologic condition or more pervious existing conditions. If the existing cover is forest, then forest cover in good hydrologic condition shall be used for this computation.

(4) The developer shall consider incorporating the use of natural topography and land cover such as wetlands, ponds, natural swales, and depressions as they exist prior to development to the degree that they can accommodate the additional flow of water.

(5) Where a stormwater management plan provides for the construction of a storm drain or stormwater management facility outfall on another property, it shall be the responsibility of the developer to adequately notify the owner of said property

of the impact on the property of the increased runoff, and to obtain from said property owner an easement for the outfall and/or a save harmless agreement.

(6) All storm drainage systems conveying off-site stormwater through private property shall be public systems or private systems which shall be designed, constructed and maintained to at least the standards of a public storm drainage system. The design and construction shall be certified by a Professional Engineer as meeting or exceeding public drainage system standards. Private storm drainage systems shall be made accessible to, and useable by, the upstream property owner by executing an easement approved by the Department and the City Attorney's office. The owner of the private storm drainage system shall execute a maintenance agreement approved by the Department and the City Attorney's office for that portion of the private storm drainage system which conveys off-site stormwater.

(7) Velocity dissipation devices and/or erosion control measures shall be placed at the outfalls of all stormwater management facilities and along the length of any outfall channel as necessary to provide a protected flowpath and non-erosive velocity of flow from the structure to a defined stream or water course.

B. Recharge.

(1) Recharge is not required for sites with land uses identified as "hotspots" according to the Design Manual.

(2) The Department shall require recharge measures for development. The Department may, on a case-by-case basis and in its sole discretion, omit the recharge requirement if it is determined that recharge is impractical. The Department will consider site-specific circumstances, including but not limited to, the following:

(a) Existence of disturbed or unsuitable soils;

(b) If the site is entirely surrounded by an existing or proposed storm drain system;

(c) If proposed recharge measures will, in staff's opinion, cause or exacerbate drainage problems or basement flooding;

(d) Redevelopment or infill sites, dependent on the size of the proposed development, proximity to an open stream system, extent of existing imperviousness and other factors.

(3) In accordance with the Design Manual, the Water Quality volume may be reduced proportionately by providing Recharge Volume treatment according to the Design Manual. Recharge drainage areas and the recharge facilities themselves must be

within the same drainage area as the stormwater facility receiving credit for the recharge volume reduction.

(4) Non-structural practices are recommended for meeting recharge needs, to the extent possible.

C. Flood protection.

(1) Overbank flood protection, which is the release of the 10-year post development discharge at the 10-year pre-development control, is required for all development or redevelopment. If site constraints exist and the applicant demonstrates that all downstream conveyance systems are adequate to safely convey the 10-year stormflow from the sub-watershed's ultimate land use, the Department, in its sole discretion, may accept a stormwater management monetary contribution for this requirement.

(2) Management of the 100-year storm is required only when the Department determines that controls are necessary for the protection of existing buildings or other critical structures.

D. Acceptable Structural Stormwater Management Practices.

(1) The following stormwater management practices are approved by the Administration for satisfying minimum water quality requirements, and in some cases, water quantity requirements:

(a) Stormwater management ponds;

(b) Stormwater management wetlands;

(c) Stormwater management infiltration;

(d) Stormwater management filtering systems; and

(e) Stormwater management open channel systems.

(2) Water quantity control may be managed in either surface storage systems (such as ponds) or underground storage systems, as approved by the Department.

(3) Other stormwater management measures, including but not limited to proprietary systems for water quality treatment, may be used for water quality controls if they meet the criteria established in the Design Manual and the Regulations and are approved by the Department and the Administration.

(4) This list of approved structural stormwater management practices is subject to revision by the Administration and the Department.

E. Ponds.

Ponds meeting the applicable conditions of United States Department of Agriculture, Natural Resources Conservation Service (NRCS) Maryland Conservation Practice Standard Pond Code 378 must be designed in accordance with said code, and require approval from the Montgomery Soil Conservation District, as applicable. All dams and reservoirs must comply with Maryland COMAR 26.17.04.05, Dams and Reservoirs.

F. Non-structural Practices.

In accordance with the Design Manual, the Department shall review and approve the use and design of non-structural practices as part of the Stormwater Management Concept and Permit process. Non-structural practices may be credited for meeting stormwater management requirements only when the Department determines, through the use of easements or site layout, that they will remain unaltered after construction is complete. Non-structural practices should be planned early in the site layout and must also be acceptable to the City Forester and the City's Department of Community Planning and Development Services.

G. Stream Restoration.

Stream restoration shall be designed to stabilize channel erosion, maintain baseflow and stormflow conveyance, and protect or enhance aquatic habitat using techniques acceptable to the City. Bio-engineering methods are encouraged wherever feasible.

DIVISION 4. INSPECTION REQUIREMENTS DURING CONSTRUCTION.

A. Inspection Schedule and Reports.

(1) The developer shall notify the Department's Inspection staff at least 48 hours before commencing any work in conjunction with the Stormwater Management Permit and upon completion of the project when a final inspection will be conducted.

(2) Periodic inspections will be conducted during construction of stormwater management systems to ensure compliance with the approved plans.

(3) Written inspection reports shall include:

(a) The date and location of the inspection;

(b) Whether construction was in compliance with the approved stormwater management plan;

(c) Any variations from the approved construction specifications; and

(d) Any violations that exist.

B. Inspection Requirements During Construction.

(1) A copy of the Sediment Control Permit and approved plans and Stormwater Management Permit and approved plans shall be available on-site at all times;

(2) At a minimum, inspections shall be made and documented at the following specified stages of construction:

(a) For Ponds:

1. Upon completion of excavation to sub-foundation and when required, installation of structural supports or reinforcement for structures, including but not limited to:

a. Core trenches for structural embankments;

b. Inlet and outlet structures, anti-seep collars or diaphragms, and watertight connectors on pipes; and

c. Trenches for enclosed storm drainage facilities;

2. During placement of structural fill, concrete, and installation of piping and catch basins;

3. During backfill of foundations and trenches;

4. During embankment construction;

5. Upon completion of final grading; and

6. During and after installation of landscaping and establishment of permanent stabilization, and at least once during each growing season for two (2) years after planting to verify a vegetation survival rate of at least 75 percent.

(b) For Constructed Wetlands:

1. At the stages specified for pond construction in Article II. Division 4.B.2. (a) of this section;

2. During and at the completion of final grading to verify accurate spot elevations in basin for correct water depth; and

3. During and after installation of landscaping and wetland reservoir area planting, and at least once during each growing season for two (2) years after planting to verify a vegetation survival rate of at least 75 percent.

(c) For Infiltration or Filtering Systems:

1. During excavation to subgrade;

2. After delivery of construction materials, and prior to their installation;

3. During placement and backfill of underdrain systems and observation wells;

4. During placement of geotextiles and all filter media;

5. During construction of appurtenant conveyance systems such as diversion structures, pre-filters and filters, inlets, outlets, and flow distribution structures;

6. Upon completion of final grading;

7. During and after installation of landscaping and establishment of permanent stabilization, and at least once during each growing season for two (2) years after planting to verify a vegetation survival rate of at least 75 percent; and

8. At the stages specified for pond construction in Article II. Division 4.B.2. (a) of this section, if constructing an infiltration basin, surface sand filter or other facility with a dam.

(d) For Open Channel Systems:

1. During excavation to subgrade;

2. During placement and backfill of underdrain systems for dry swales;

3. During installation of diaphragms, check dams, weirs, or other structural components;

4. Upon completion of final grading; and

5. During and after installation of landscaping and establishment of permanent stabilization, and at least once during each growing season for two (2) years after planting to verify a vegetation survival rate of at least 75 percent.

(e) For Non-structural Stormwater Management Practices:

1. Upon completion of final grading and the establishment of permanent stabilization, and before issuance of use and occupancy approval.

(f) For all other structural stormwater management devices, inspections shall be made as required by the Department. The Department may also require

inspection of proprietary stormwater management devices by the manufacturer's representative.

(g) For Stream Restoration Projects:

1. Upon stakeout of stream improvement locations and limits of disturbance;

2. After delivery of construction materials and prior to their installation;

3. During grading and installation of each restoration feature;

4. Upon completion of construction and installation of landscaping.

C. As-Built Drawings.

When construction is completed, the developer must submit as-built plans for approval prior to release of the Stormwater Management Permit and bond. As-built plans must be sealed by either a Professional Engineer or Professional Land Surveyor. At a minimum, as-built certification shall include a set of drawings comparing the approved stormwater management plan with what was constructed and noting any revisions. Where relevant, the as-built plan shall also include a landscape drawing showing any revisions or substitutions to plantings within the facility. The City may require additional information. Once approved, copies of the as-built drawings must be given to the City in both Mylar form and in electronic format acceptable to the City for use with the City's Geographic Information System database.

DIVISION 5. MAINTENANCE AND INSPECTION AFTER CONSTRUCTION.

A. Routine Inspection.

The City shall inspect all stormwater management systems to ensure that preventative maintenance is performed. Inspection shall occur during the first year of operation and at least once every three years thereafter. In addition, a maintenance agreement between the owner and the City shall be executed for privately owned stormwater management systems as described in Section 19-56 of Chapter 19 of the Rockville City Code.

B. Notification required.

A person must notify the Department at least 48 hours before initiating any maintenance of a private stormwater management facility.

C. Qualifications of Maintenance Personnel.

A person performing any cleaning, de-watering, maintaining, repairing, or retrofitting of a stormwater management facility must have demonstrated experience in stormwater management facility construction and inspection and hold a certificate of attendance awarded through a training program approved by the Department. A person who performs maintenance or repairs on an underground facility must have the training and credentials specified in:

(a) The U. S. Department of Labor, Occupational Safety and Health Administration Regulation on permit-required confined spaces (29 CFR, 1910:146);or

(b) The State of Maryland's applicable requirements for Oil Pollution and Tank Management (COMAR Title 26, Subtitle 10).

D. Inspection Reports.

The City shall maintain its inspection reports for all stormwater management systems. Inspection reports for stormwater management systems shall include the following:

(a) The date of inspection;

(b) Name of inspector;

(c) The condition of:

1. Vegetation or filter media;
2. Fences or other safety devices;
3. Spillways, valves, or other control structures;
4. Embankments, slopes, and safety benches;
5. Reservoir or treatment areas;
6. Inlet and outlet channels or structures;
7. Underground drainage;
8. Sediment and debris accumulation in storage and forebay areas;
9. Any non-structural practices to the extent practicable; and
10. Any other item that could affect the proper function of the stormwater management system.
11. Description of needed maintenance.

E. Deficiencies.

After notification is provided to the owner of any deficiencies discovered by an inspection of a stormwater management system, the owner shall have a reasonable time period as determined by the Department to correct the deficiencies. The City shall then conduct a subsequent inspection

to ensure completion of the repairs. If repairs are not undertaken or are found to be improperly done, then correction and enforcement procedures may be taken pursuant to Chapter 19 of the Rockville City Code.

F. Final inspection.

Upon completion of maintenance or repair work, the Department must conduct a final inspection of the facility. If the Department determines that the facility is in effective working condition, it will also indicate this on its records for the facility. If the Department determines that the facility is not in effective working condition, it must prepare a written report of what additional maintenance or repair is needed. The report must be included in the record for the facility and a copy must be sent to the owner of the facility.

G. Exception.

Non-structural stormwater management practices do not require maintenance or inspection by the City.

ARTICLE III

SEDIMENT CONTROL REGULATIONS

DIVISION 1. POLICY AND PROCESS

A. When Required.

A Sediment Control Permit and an approved Sediment Control Plan are required for the following land disturbing activities:

(a) Major Land Disturbing Activity

Land disturbing activity involving 5,000 square feet or more of disturbed area or 100 cubic yards or more of grading;

(b) Environmentally Sensitive Areas

Any land disturbing activity within a stream buffer as defined in the City's Environmental Guidelines;

(c) Small Land Disturbing Activity Resulting in a New Building

Land disturbing activity involving less than 5,000 square feet of disturbed area and less than 100 cubic yards of grading requires a Sediment Control Permit if a new building will be constructed, including a new single-family-detached dwelling unit. Construction of other small land disturbing activities that does not result in a new building, such as deck support foundations, patios, small additions, sheds, and minor commercial development, does not require a Sediment Control Permit. All land

disturbing activity is subject to the provisions of Article III. Division 4., regardless of whether a Sediment Control Permit is issued.

B. Issuance.

(1) A Sediment Control Permit shall be issued only after issuance of a Forestry Permit, where such approval is required. A Sediment Control Permit by itself does not authorize tree removal or clearing.

(2) A Sediment Control Permit may be referenced by, and incorporated in, a more inclusive Public Works Permit. In such cases, all conditions of a Sediment Control Permit shall apply to the Public Works Permit.

(3) A copy of the Sediment Control Permit and approved Sediment Control Plan shall be available on-site at all times.

C. Rough Grading.

The Department may issue, at its sole discretion, a Sediment Control Permit for rough grading of a site, and will require fees as provided by resolution of the Mayor and Council and bonds or other securities as determined by the Department. Permission for rough grading authorizes general grading of land only, and does not authorize clearing, excavation for a structure or footings, laying of foundations or any activity which determines a specific use for the site. Sediment Control Permit issuance for rough grading does not indicate approval of use, design, or construction of any structure, including a stormwater management structure. Any grading performed prior to final approval of a Use Permit, Building Permit, or other required City permit or approval, is done at the developer's own risk that the work performed is not appropriate to the approved use.

D. Builder's Sediment Control Permit.

The Department may issue a Sediment Control Permit to a builder acting as the developer for construction of one or more individual lots within an approved development project. The Department will determine submittal requirements on a case-by-case basis, and will require fees as provided by resolution of the Mayor and Council and bonds or other securities as determined by the Department.

E. Approval by the Administration.

Any State or federal project requires approval by the Administration.

DIVISION 2. SUBMITTAL REQUIREMENTS

A. Sediment Control Permit.

Submittals for Sediment Control Permit approval shall include, at a minimum, the following information for approval by the City:

(a) Sediment Control application and all required fees;

(b) Sediment Control Plan;

(c) Computations, construction details and specifications necessary to support the Sediment Control Plan;

(d) Any temporary or permanent easements needed for grading, drainage or other uses;

(e) A phasing plan, when required by the Department, to limit mass clearing and grading;

(f) An itemized estimate of the type, quantity, and cost of materials required for erosion and sediment control measures, including stabilization (on 8 ½ x 11 sheets);

(g) Performance bond or other surety; and

(h) An NRI/FSD (Natural Resources Inventory/Forest Stand Delineation) and a Forest Conservation Plan (FCP), both approved by the City Forester, as required by Chapter 10.5 of the Rockville City Code.

B. Sediment Control Plan.

A Sediment Control Plan shall consist of the following:

(a) A vicinity sketch indicating north arrow, scale and other information necessary to easily locate the property;

(b) Name, address and telephone number of the property's owner, and, if different, the developer and/or applicant;

(c) An accurate topographical drawing(s) of the site. The mylar original drawing shall be no larger than 24" x 36" and at a scale of not less than one (1) inch to thirty (30) feet, unless otherwise approved by the Director, and shall show:

1. An appropriate legend;

2. A clear and definite delineation of the limits of the work (i.e. showing area to remain undisturbed and showing areas to be disturbed);

3. Elevations, dimensions, extent and slope of all existing and proposed grading and the location of all existing and proposed buildings, structures, paving, utilities, sewers, water and storm drains, wooded areas and tree groups, and individual trees greater than six (6) inches in diameter on the site within twenty (20) feet of the area to be disturbed,

all clearly indicated with proposed contours at the same interval as required or used for existing topography;

4. Drainage area boundary and acreage of the land tributary to the site, and of the existing and proposed sub-drainage areas within the site;

5. Storm drainage and runoff conveyance provisions, including 10-year discharge and velocity and site conditions at outfalls and other surface water discharge points;

6. Design and location of sediment control and stormwater management measures to be constructed or utilized in connection with, or as part of, the proposed work. Said measures shall be designed to minimize on-site erosion and off-site sedimentation, and shall conform to the standards, specifications and requirements of these Regulations; and

7. All details, notes, specifications and information relevant to the specified sediment and erosion control measures.

(d) Sequence of construction for the relationship of implementation and maintenance of sediment controls and each phase of disturbance or construction. Said sequence shall, at a minimum, include a time schedule indicating the anticipated starting and completion dates of:

1. Pre-construction meeting with Department Inspector prior to commencement of clearing and grading;

2. Construction of perimeter and other initial sediment controls;

3 Approval of sediment controls by Department Inspector prior to proceeding with clearing, grading or construction;

4. Remaining clearing;

5. Road grading;

6. Grading for the remainder of the site;

7. Utility installation and usage/blockage of storm drain system during construction;

8. Final grading, landscaping, or stabilization;

9. Approval of Department Inspector of final stabilization prior to removal of sediment controls; and

10. Removal of sediment controls.

The permittee may not modify the sequence during construction without the prior approval of the Department. The sequence of construction shall reflect any phasing of grading or construction required by the City.

(e) Any other plans, drawings, materials, or information as may be required by the Department.

C. Certifications Required on Sediment Control Permit Plans.

The following certifications shall appear on the Sediment Control Permit Plan:

(a) Design Certification and Quantities

"I hereby certify that this plan has been prepared in accordance with the latest Maryland Standards and Specifications for Soil Erosion and Sediment Control, and Chapter 19 of the Rockville City Code." The estimated total amount of excavation and fill has been computed to _____ cubic yards of excavation and _____ cubic yards of fill and the total area to be disturbed as shown on these plans has been determined to be _____ square feet. The impervious area shown on this plan (including that within 30 feet of the contiguous right-of-way) is _____ acres."
Signature: _____
Printed name and title:_____
Date: _____
Maryland Registration number: _____
_____
Title and License Number: (Professional Engineer, Professional Land Surveyor, Licensed Landscape Architect or Architect)

(b) Owner's/Developer's Certification

"I/We hereby certify that any clearing, grading, construction or development, or all of these, will be done pursuant to this plan and that responsible personnel involved in the construction project will have a certification of training at a Department of the Environment-approved training program for the control of sediment and erosion before beginning the project, and that the applicable sediment control conditions and requirements of the City of Rockville and the State of Maryland and its agencies are hereby made part of this plan." The Certificate of Training for Responsible Personnel requirement may be waived by the City of Rockville on any project involving four or fewer residential units.
Signature _____
Printed name and title _____

Date _____

D. Additional Sediment Control Permit Plan Notations

(1) The City's Standard Notes for Erosion and Sediment Control, as found in the "City of Rockville Standards and Details for Construction", shall appear on all Sediment Control Permit Plans.

(2) The following notation shall appear on all Sediment Control Permit Plans:

"Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within:

(a) Seven calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1); and

(b) Fourteen days as to all other disturbed or graded areas on the project site.

The requirements of this note do not apply to those areas that are shown on the plan and are currently being used for material storage, or for those areas on which actual construction activities are currently being performed. Maintenance shall be performed as necessary to ensure that the stabilized areas continuously meet the appropriate requirements of the current 'Maryland Standards and Specifications for Soil Erosion and Sediment Control'."

E. Submittal Requirements for Small Land Disturbing Activity.

The department may waive or modify any of the submittal requirements for land disturbing activity involving less than five thousand (5,000) square feet and 100 cubic yards of grading where justified by the extent of land disturbing activity and/or potential environmental impact of the development. The Department, in its sole discretion, may accept a rough sketch plan showing basic sediment control measures to protect the environment in lieu of a full Sediment Control Plan.

DIVISION 3. SEDIMENT CONTROL DESIGN CRITERIA

A. Required

Sediment control measures are required for all land disturbing activities requiring Sediment Control Permits and are encouraged for other land disturbing activities. All measures shall conform to the requirements and guidance in the latest version of the "Maryland Standards and Specifications for Soil Erosion and Sediment Control".

B. Design and Construction of Sediment Control Measures.

The following standards, specifications, and requirements relating to the stabilization of land and prevention of erosion and sedimentation during construction shall be considered in the

development of sediment control measures and incorporated into the Sediment Control Permit Plan:

(a) Development shall be fitted to the topography and soils so as to create the least erosion potential.

(b) Natural vegetation shall be retained wherever possible and/or as long as possible.

(c) The smallest practical area of land shall be disturbed at any one period during development.

(d) Sediment control measures must be provided in subsequent phases of multiphase development or in redevelopment projects to protect existing on-site stormwater management facilities from contamination during construction.

(e) Appropriate sediment control practices such as silt fences, interceptor ditches, berms, terraces, soil erosion checks and sediment basins shall be installed to minimize soil and water losses which are described in the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control, and any revision or amendment thereof.

(f) When a permanent building or structure will be below ground water table level, a well(s) and pump(s), or other approved measures, shall be installed near the construction area so as to draw down the water level below proposed footings. This pumping shall be continuous until construction below the ground water table is complete. Pumping water directly from a pool having suspended solids should be discouraged but if it becomes necessary, a floating intake and approved sediment control measures shall be used to keep sediment and siltation controlled on-site so as to release clear or translucent water.

(g) All other applicable State standards or regulations as may now exist or hereafter be adopted. The Department will make available upon request copies of all current State standards and regulations.

DIVISION 4. SEDIMENT CONTROL MEASURES DURING LAND DISTURBANCE.

A. In addition to any other requirements or conditions, the following apply during land disturbing activity:

(1) Maintenance of Protective measures

(a) Satisfactory ground cover, where required, shall be maintained during the life of the project and such cover is subject to inspection by the Department.

(b) All graded surfaces, erosion control measures, vegetative covers and/or other protective measures disturbed or destroyed during the course of operations

shall be promptly repaired, restored and maintained in accordance with the approved plan until permanent measures are accepted by the Department.

(2) No debris or other materials shall be deposited in floodplains, watercourses, public streets, highways, sidewalks, or other public thoroughfares.

(a) No person engaged in any land disturbing or hauling activity shall cause or permit any soil, earth, sand, gravel, rock, stone, or other material, or liquid to be deposited upon or to roll, flow, wash or be blown by wind upon or over the premises of another in a manner to cause damage to such premises without the express consent of the owner of such premises; or upon or over any public street, street improvement, road, sewer, storm drain, watercourse, or right-of-way, or any public property in such a manner to damage or interfere with the use of such property.

(b) If any soil, earth, sand, gravel, rock, stone or other material or liquid is caused to be deposited or to roll, flow or wash upon any public or private property in violation of this section, the person responsible shall be notified and shall cause the same to be immediately removed from such property. In the event that it is not so removed, the Department shall cause such removal and the cost of such removal by the Department shall be paid to the City by the person who failed to remove the material. The cost of such removal shall become as a lien against all property and all rights to property, real or personal, of any person liable to pay said costs, and shall be collected in the same manner as ordinary taxes.

DIVISION 5. INSPECTION AND ENFORCEMENT

A. Inspection and enforcement of conditions of the Sediment Control Permit shall be the responsibility of the Department, if so delegated by the Administration.

B. The Department shall inspect every active site with a Sediment Control Permit for compliance with permit conditions once every two weeks, on average.

C. The Department shall prepare a written report after each inspection, listing the inspection's date and location, and indicating compliance or noncompliance, any deficiencies in the Sediment Control Permit plan, implementation or maintenance, and if a violation exists, the type of enforcement action taken.

D. The Department shall notify the on-site personnel or the owner/developer in writing when violations are observed, including the nature of the violation, required corrective action, and a time period in which said violation must be corrected.

E. The Department shall investigate sediment control complaints from any interested party and take enforcement action if violations are confirmed. The Department shall notify the complainant of the result of any investigation and any action taken or proposed.

F. The issuance of a Sediment Control Permit and the inspection of the construction site by the Department does not relieve the applicant of the continuing responsibility to effectively abate sediment pollution, properly install sediment control measures, and maintain such measures in good working order.

G. The Department may take any one or more of the following enforcement actions:

(1) If the violation persists after the date specified for correction in the notice of violation, the Department shall stop work on the site. The Department shall determine the extent to which work is to be stopped, which may include all work on the site except that work necessary to correct the violation.

(2) The Department may issue a municipal infraction citation and fine for each day a violation of the approved Sediment Control Permit, these Regulations or Chapter 19 of the City Code exists.

(3) If reasonable efforts to correct the violation are not undertaken, the case may be referred to the City Attorney's Office or the State for legal action.

(4) The City may deny the issuance of any permit to an applicant when it determines that the applicant is not in compliance with the provisions of a Sediment Control Permit, Stormwater Management Permit, Public Works Permit or Building Permit.

(5) If a person is working without an approved Sediment Control Permit where one is required, the Department shall stop work on the site.

(6) Any step in the enforcement process may be taken at any time, depending upon the severity of the violation.